



**GUAM PUBLIC HEALTH LABORATORY SPECIMEN GUIDELINES  
ACUTE NEUROLOGICAL ILLNESS OF UNDETERMINED ETIOLOGY**

<b>Case Definition</b>	<p>To be considered a case and for laboratory testing, a patient must meet ALL 4 of the following criteria:</p> <ol style="list-style-type: none"> <li>1. Patient <math>\leq</math>21 years of age,</li> <li>2. Acute onset of focal limb weakness,</li> <li>3. On or after August 1, 2014 AND</li> <li>4. An MRI showing spinal cord lesion largely restricted to gray matter</li> </ol>
<b>Specimen Requirements</b>	<p><b>I. For Patients that are currently hospitalized:</b>  Collect and submit EACH of the following:</p> <ul style="list-style-type: none"> <li>• CSF specimen</li> <li>• Upper respiratory tract specimen(ranked by 1<sup>st</sup> preference, to last preference <ul style="list-style-type: none"> <li>- Nasopharyngeal swab&gt;&gt;nasal swab&gt;&gt;nasal wash/aspirate &gt;&gt;oropharyngeal swab</li> </ul> </li> <li>• Serum sample <ul style="list-style-type: none"> <li>- Acute and convalescent, if possible</li> </ul> </li> <li>• TWO stool specimens, in accordance with the recommendations for poliovirus testing in all patients with a compatible clinical picture <ul style="list-style-type: none"> <li>- Whole stool&gt;&gt; rectal swab</li> </ul> </li> </ul> <p><b>II. For Patients that have already been discharged from the hospital:</b></p> <ul style="list-style-type: none"> <li>• If less than 30 days since the hospital admission date, send any stored specimens from the list above. If no stored specimen is available, collect new specimen following the list above.</li> <li>• If 30 days or more since the hospital admission date, send any stored specimens from the list above.</li> </ul>
<b>Specimen Collection Guidelines For Hospitalized Or Discharged Patients</b>	<ol style="list-style-type: none"> <li>1. CSF – collect as early in illness as possible, preferably at time of first evaluation or admission. Collect in sterile container, send as much sample as available.</li> <li>2. Upper Respiratory Tract Specimen <ul style="list-style-type: none"> <li>• Nasopharyngeal Swab – collect as early in illness as possible, preferably at time of first evaluation or admission. Store in viral transport medium. Minimum volume = 1 ml.</li> </ul> </li> </ol>

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	<ul style="list-style-type: none"> <li>• Nasal Swab - collect as early in illness as possible, preferably at time of first evaluation or admission. Store in viral transport medium. Minimum volume = 1 ml.</li> <li>• Nasopharyngeal wash or Aspirate - collect as early in illness as possible, preferably at time of first evaluation or admission. Collect in sterile container. Minimum volume = 1 ml</li> <li>• Oropharyngeal swab - collect as early in illness as possible, preferably at time of first evaluation or admission. Store in viral transport medium. Minimum volume = 1 ml.</li> </ul> <p>Note: For NP or OP swabs, use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. DO NOT use calcium alginate swabs or swabs with wooden sticks.</p> <ol style="list-style-type: none"> <li>3. Serum – Paired acute and convalescent specimens are optimal. Single serum specimens are also acceptable. Minimum volume <math>\geq 0.5</math> ml.</li> <li>4. Stool – two samples total, collected at least 24 hours apart, both collected as early in illness as possible and ideally within 14 days of illness onset. <ul style="list-style-type: none"> <li>• Whole stool – collect in sterile container, no special medium required. Minimum volume <math>\geq 1</math> gram.</li> <li>• Rectal swab – place and store swab in viral transport medium.</li> </ul> </li> </ol> <p>Note: For rectal swabs, use only sterile Dacron or rayon swabs with plastic shafts or if available, flocked swabs. DO NOT use calcium alginate swabs or swabs with wooden sticks.</p>
<p><b>Specimen Collection Guidelines for Deceased Patients</b></p>	<p><b>In the event of a decedent, send both of these specimens:</b></p> <ol style="list-style-type: none"> <li>1. Fresh frozen tissue – place directly on dry ice or liquid nitrogen, store at -70°C and ship on dry ice. Representative sections from brain/spinal cord (including gray and white matter), heart, lung, liver, kidney and other organs as available.</li> <li>2. Formalin-fixed or formalin-fixed paraffin-embedded tissue- Avoid prolonged fixation, tissues should have been fixed in formalin for 3 days, then transferred to 100% ethanol. Store and ship at room temperature in carriers to prevent breakage.</li> </ol>
<p><b>Specimen Submission Guidelines</b></p>	<ul style="list-style-type: none"> <li>• Label all samples with patient’s name or ID number, specimen ID number and date of collection.</li> <li>• Samples from each patient should be submitted with a hard copy of Page 2 of the completed <u>Patient Summary form</u> (<a href="http://wwwdev.cdc.gov/ncird/investigation/viral/sep2014.html#forms">http://wwwdev.cdc.gov/ncird/investigation/viral/sep2014.html#forms</a>),</li> </ul>

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	<p>page 2 contains the patient demographic and ID information), “Acute Neurologic Illness with Limb Weakness in Children of Undetermined Etiology.”</p> <ul style="list-style-type: none"> <li>• Call the Guam Public Health Laboratory (GPHL) at 474-7158 or 471-7355 before collecting and sending specimens for suspected EV-D68. <b><u>NO SPECIMEN WILL BE ACCEPTED AT GPHL AND CDC WITHOUT PRIOR CONSULTATION.</u></b></li> <li>• Fill out COMPLETELY the CDC Specimen Submission form 50.34 (attached).</li> <li>• Call the GPHL 735-7158, 735-7153 or 735-7355 to inform staff of the specimen delivery.</li> <li>• Specimens will be sent to a CDC reference laboratory for testing.</li> <li>• Physicians/providers will be notified of the result by the GPHL Technologist once the final result is received from CDC.</li> </ul>
<p><b>Specimen Transport Guidelines</b></p>	<p>Transport frozen specimens with cold packs (2-8 C) to maintain frozen state or with dry ice to GPHL, except for the pathology specimens.          Deliver specimens to the GPHL <b>no later than 4 PM, business day Mondays-Fridays.</b></p> <p><b>Frozen specimens will be sent to CDC on dry ice.</b></p>
<p><b>Rejection Criteria</b></p>	<ul style="list-style-type: none"> <li>• Specimens sent to the GPHL without prior consultation and notice.</li> <li>• Specimens collected in calcium alginate swabs or swabs with wooden sticks.</li> <li>• Specimen quantity is insufficient to perform the test;</li> <li>• Specimen not packed as described in Specimen Submission guidelines</li> <li>• Specimen is not received frozen.</li> <li>• Unlabeled specimens, incomplete label on specimen (Refer to Specimen Submission Guidelines).</li> <li>• Illegible/ incomplete Submission form.</li> <li>• Specimen label does not match the Submission form.</li> </ul>
<p><b>Result Notification</b></p>	<p>Laboratory reports will be forwarded to the submitting facility, Territory Epidemiologist, and the BCDC Administrator via FAX.</p> <p>Any other request for copies of laboratory reports, apart from that stipulated above will not be accepted.</p>
<p><b>Contact Information</b></p>	<p>Alan Mallari, Microbiologist II, GPHL          (671) 735-7141 or 735-7355  <a href="mailto:alan.mallari@dphss.guam.gov">alan.mallari@dphss.guam.gov</a></p> <p>Lea Nisay, Microbiologist I, GPHL (Alternate)          (671)735-7170 FAX (671) 735-0348 or (671) 734-2104  <a href="mailto:lea.nisay@dphss.guam.gov">lea.nisay@dphss.guam.gov</a></p>

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Attachment: CDC Specimen Submission Form 50.34

References:

1. DPHSS Medical Advisory: Acute Neurologic Illness of Undetermined Etiology, Oct. 24, 2014
2. CDC Specimen Collection Instructions